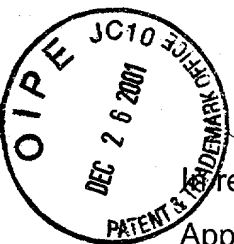


#24



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Pre National Phase of:

Applicant: Stephan Erbel et al.
Application No.: 09/898,910
Filing Date: July 3, 2001
Title: METHOD FOR PRODUCING OR UPDATING A
RADIOTHERAPY PLAN
Attorney Docket No. SCHWP0145US

PRELIMINARY AMENDMENT DELETING MULTIPLE DEPENDENCIES

Commissioner for Patents
United States Patent and Trademark Office
Washington, DC 20231

Sir:

Please amend the application in accordance with the following appended parts:

- A. Clean Version of Replacement Paragraph/Section/Claim with Instructions for Entry; and
- B. Version with Markings to Show Changes Made.

Remarks

By way of the foregoing, all of the claims have been amended to delete multiple dependencies. In the event there still remains a claim that depends from more than one claim, the Office is hereby authorized to amend such claim to depend from the first mentioned of the multiple claims from which it depends.

Respectfully submitted,

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**A. Clean Version of Replacement Paragraph/Section/Claim
with Instructions for Entry**

Please amend the application as follows:

In the Claims:

Please substitute the following claims for the pending claims of corresponding number.

3. The method as set forth in claim 1, wherein the patient is subject to an imaging method, preferably a CT or MR image recording method, more than once over the duration of fractionated radiation exposure.
5. The method as set forth in claim 1, wherein the position of the patient relative to the imaging device is detected outside the recording range of the imaging device via locating markers, preferably infrared reflecting markers, by an imaging method, preferably a CT or MR image recording method, during or directly before or after recording a first patient data set.
7. The method as set forth in claim 1, wherein a data set comprising the target volume is supplemented by automatic fusion with data from an older, larger volume data set, in order to obtain all the data necessary for calculating the dosage.
8. The method as set forth in claim 1, wherein the difference between the results of a new radiotherapy plan as compared to a previous plan are automatically quantified and, if the difference is within a previously specified tolerance range, the new plan is automatically qualified as an approved plan.
9. The method as set forth in claim 1, wherein, for transferring a radiotherapy plan onto a more recent planning data set, the position and form of a target volume and the organs to be protected are fully or partly adopted automatically into the new plan from the old plan.

12. The method as set forth in claim 9, wherein an image detection plane of an imaging device, with the aid of which the planning data set is to be updated, is determined in the image recording range by introducing a calibration phantom comprising markings which can be detected both by image detection and by an external tracking system, wherein a spatial relationship with the patient markings which are not detected by image detection is produced for the images detected.

13. A program which, when running on a computer or loaded in a computer, causes the computer to perform the method in accordance with claim 1.

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B. Version with Markings to Show Changes Made

Please amend the application as follows:

In the Claims:

3. (Amended) The method as set forth in claim 1 [or 2], wherein the patient is subject to an imaging method, preferably a CT or MR image recording method, more than once over the duration of fractionated radiation exposure.
5. (Amended) The method as set forth in [any one of claims 1 to 4] claim 1, wherein the position of the patient relative to the imaging device is detected outside the recording range of the imaging device via locating markers, preferably infrared reflecting markers, by an imaging method, preferably a CT or MR image recording method, during or directly before or after recording a first patient data set.
7. (Amended) The method as set forth in [any one of claims 1 to 6] claim 1, wherein a data set comprising the target volume is supplemented by automatic fusion with data from an older, larger volume data set, in order to obtain all the data necessary for calculating the dosage.
8. (Amended) The method as set forth in [any one of claims 1 to 7] claim 1, wherein the difference between the results of a new radiotherapy plan as compared to a previous plan are automatically quantified and, if the difference is within a previously specified tolerance range, the new plan is automatically qualified as an approved plan.
9. (Amended) The method as set forth in [any one of claims 1 to 8] claim 1 , wherein, for transferring a radiotherapy plan onto a more recent planning data set, the position and form of a target volume and the organs to be protected are fully or partly adopted automatically into the new plan from the old plan.
12. (Amended) The method as set forth in [any one of claims 9 to 11] claim 9, wherein an image detection plane of an imaging device, with the aid of which the planning data set is to be updated, is determined in the image recording range by introducing a calibration phantom comprising markings which can be detected both by

image detection and by an external tracking system, wherein a spatial relationship with the patient markings which are not detected by image detection is produced for the images detected.

13. (Amended) A program which, when running on a computer or loaded in a computer, causes the computer to perform the method in accordance with [any one of claims 1 to 12] claim 1.